

Exploring Changing Perceptions of Whales Lessons for Elementary School Students

- Attached are lessons spanning four different perceptions of whales—indigenous whaling, whaling under sailing, twentieth-century research, and modern ideas.
- The lessons are meant to function as a whole or individually.
- Each theme has at least two lessons with materials, goals, Connecticut Core standards addressed, and suggest methods as well as some pertinent additional resources from the Mystic Seaport Teacher Institute bibliography.
- Teachers from Mystic Seaport's Summer Teacher Institute reviewed the lesson plans.
- The lessons are intended for upper elementary school students though vary.
- Anticipated lengths of the lessons range from 15-60 minutes.

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Introduction

These lessons are not meant to be exhaustive, complete, or paint any picture fully. Rather, they attempt to examine snapshots of specific times and places to elucidate the varied and potent lenses throughout which people have viewed whales. Below is a brief summary of the focuses around which lessons have been created.

Saving Whales discusses **modern** perceptions of whales. While we may love whale watches, this has not always been the case. This lesson is placed first to help students realize that their opinions are not universally accepted and attempts to illustrate how current perceptions differ from historic ones, as well as how current perceptions are not uniform.

Needing Whales focuses on **indigenous** perceptions and spans the **historic and present**. Whaling existed well before the arrival of Europeans to this continent. The Wampanoag hunted right whales that beached and came close to shore. Indigenous whaling still occurs too. Many Inuit cultures have the right to hunt in the United States, Greenland, and Canada. These groups hunt to provide nourishment and to maintain cultural traditions. Some use modern technology; some are sanctioned to continue to use traditional techniques. Some points not covered in the following lessons but worth noting: there is a debate surrounding modern indigenous whaling; indigenous whaling cultures beyond the Arctic in the Pacific also continue; colonization in New England did not mean the end of indigenous whalers—Native Americans boarded many whaling ships in the nineteenth century.

Selling Whales focuses on the whaling under sail—the **mid-nineteenth century**. During this time, thousands of vessels set sail for years in order bring back valuable whale materials that were used in a variety of important products including whale oil for lights and lubricant and whale bone (baleen) that was essentially the plastic of the day. Whales were seen as a commodity. They were also feared. It is important to note that even though whale populations were depleted during this period, whaling populations declined more dramatically during the early twentieth century as the process became more mechanized.

Understanding Whales focuses on the early scientific research regarding the ocean and the origins of the conservation movement that occurred in the **mid-twentieth century**. During this time, people began learning more about the ocean and having more interest in it, eventually moving past economic interests too. (Though, it should be noted this shift occurred after the discovery of petroleum as a fuel source, after whales had lost their importance to the United States economy.) It also addresses people coming to think of whales as intelligent animals.

For all of these lessons, the views explored are not the only ones that existed. These lessons intend to highlight some of the complexity regarding humans' different interactions with the largest animal on earth, not oversimplify.

Saving Whales

- This is Lesson 1 of 4 regarding changing perceptions of whales that explores modern perceptions of whales. It is meant to be used individually or as a part of a larger unit on different perceptions of whales.
- Below are two activities; the first explores modern versus historic perceptions, and the second explores various modern perspectives.
- The main goal of these lessons is to highlight that our current perceptions of whales is relatively new and deeply influenced by the images we see and is not the perception that other people have.

Activity 1: How do we think of whales?

Intended grades:

- 2nd-4th

Anticipated length:

- 25 minutes

Goals:

- By examining images of whales in popular culture, students will understand that their feelings regarding whales are influenced by how whales are presented to them.
- This activity will also serve as a starting point for future lessons. By understanding how their perception of whales is shaped, students will have a context to understand that other cultures have different perceptions that have been formed by their surroundings.
- Students will interpret illustrations and analyze their feelings based on whales and how society has influenced these feelings.
- Students will begin to understand the concept of “appreciate and value” in terms of saving and protecting whales.

Standards Addressed:

- 3.8 Designing strategic questions and opportunities that appropriately challenge students and actively engage them in exploring the content through strategies such as discourse and/or inquiry-based learning.
- 4.1 Using a variety of evidence-based strategies to enable students to apply and construct new learning.

Materials:

- Attached worksheet
- Activity could also be done as a class discussion or in small groups with images projected.

Suggested Method:

- Pass out attached worksheet.
- Have students answer the first two questions.
- Discuss the words they wrote and the whale images they remember.
- Have students look at Image 1, answer questions 3 and 4, and then discuss.

- Have students look at Image 2, answer questions 5 and 6, and then discuss.
- Have students answer questions 7 and 8, and then discuss.
- Explain that whales did not always used to be so highly regarded and that in some places around the world they are still thought of as food.

Activity 2: Differences of Opinion

Intended grades:

- 4th-6th

Anticipated length:

- 60 Minutes

Goals:

- To learn that different perspectives on whales exist.
- To analyze and infer these perspectives based on secondary sources
- To understand how these perspectives change based on different lifestyles.
- To use a map.

Standards: Addressed:

- 2.2 Promoting engagement in and shared responsibility for the learning process and providing opportunities for students to initiate their own questions and inquiries.
- 3.5 Selecting or designing instructional strategies, resources and flexible groupings that provide opportunity for students to think critically and creatively, and solve problems.
- 3.6 Integrating learning activities that make real-world, career or global connections, and promote interdisciplinary connections whenever possible.
- 4.4 Varying the student and teacher roles in ways that develop independence and interdependence with the gradual release of responsibility to students.

Materials:

- Printouts of representative, fictional bios presenting different perspectives on whaling (attached).
- Map of world with important locations noted (attached).

Suggested Method:

- Divide students into six groups. Each group will be responsible for becoming experts on one of the fictional biographies. Give each group a print out of one character, and a map of the world.
- Have each member of each group complete the first page of the attached worksheet for their assigned biography. Make sure each group can point to their character's location on the bigger map.
- Then, switch the groups so that there is one expert for each person in every group.
- It is now each expert's job to explain his/her person to the rest of the group, who can fill out the second and third pages of the accompanying worksheet.
- After this has been done, a large class discussion can occur.
 - Did they learn anything new about how people around the world might live?

- What accounts for these differences?
- Who would they consider to be pro-whaling? Anti-whaling? Could the biographies be arranged along a spectrum in terms of how they feel about whaling? Where do they fit?
- Did they notice a reason why it is important for international cooperation regarding whales? (See Anita's biography.)
- Enrichment Lesson: For an older group, students could be asked to participate in a debate in groups or as a whole class.

Additional Resources:

"International Whaling Commission." IWC. iwcoffice.org

Contains extensive information about whale populations, species, and international regulations. Includes publications for download, information on native whaling, ship strikes, and history of the IWC and regulations.

King, Patricia. *Mabel the Whale*. Chicago: Follett Publishing, 1958.

Perhaps a 3rd grade level. Whale brought in to Marineland and caring for the animal for visitors. Good discussion piece, fun illustrations.

Raffi, *Baby Beluga: Songs to Read*. New York: Crown Books for Young Readers, 1992.

Happy, loving, free Beluga whale. Also songs and animations available on Youtube and elsewhere.

Activity 1: How do we think of whales?

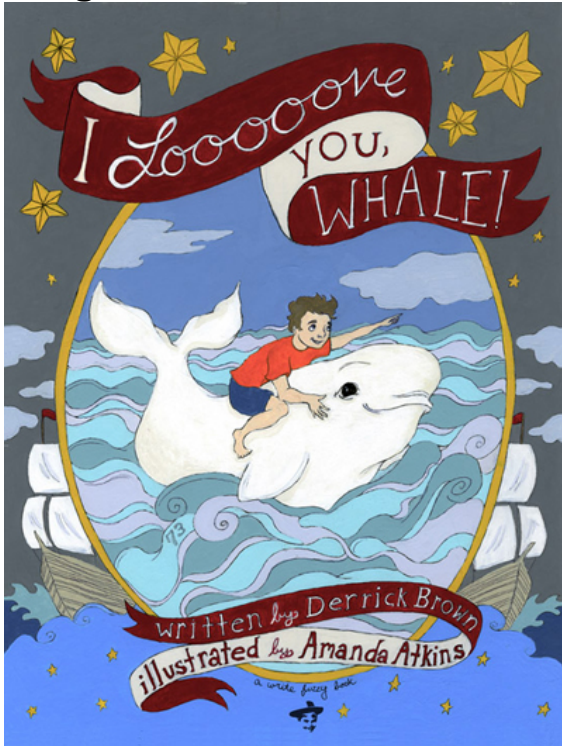
Name: _____

1. Quick! Give me three words that you think of when you think of whales.

Whales are _____, _____, and _____.

2. Can you think of a time when you saw a whale in a television show, a movie, or a book? What was the whale like?

Image 1



<http://www.writefuzzy.com/store/>

3. Describe this picture. What are the boy and whale doing?

4. What words can you use to describe the whale?

Image 2



Flurry, William Duke, 1848. Museum of Tasmania,
<http://www.paddlewithsim.com/sustainability/whales>

5. Describe this picture. What are the people doing?

6. What words can you use to describe the whale?

7. How are the two images different?

8. How might we think of whales if the only images we ever saw were like Image 2?

Activity 2: Differences of Opinion Worksheet

Name: _____

Name of person you're learning about: _____

Where is this person from?

How do whales play a part in their everyday life?

Do they *need* whales? If so, what for?

Think of 2 ways this person's life is different than yours that you haven't already talked about in this worksheet.

1. _____

2. _____

For all of the other people that you did not specifically read about, please write:

1. Where they are from.
2. How whales are a part of their daily life.
3. What might happen if they could not use whales in this way anymore.

Name: _____

1. _____

2. _____

3. _____

Name: _____

1. _____

2. _____

3. _____

Name: _____

1. _____

2. _____

3. _____

Name: _____

1. _____

2. _____

3. _____

Name: _____

1. _____

2. _____

3. _____

G'day! I'm Maddy. I live near Melbourne, Australia, and my dad is a fisherman. Every day he goes out to catch fish using big nets. Then, he sells the fish to stores and companies. Sometimes, whales get caught in his and his coworkers' fishing nets. They normally die because the nets make it so they can't swim to the surface and breathe. Some people are mad about it. It makes me sad too, but I don't know what to do about it. If the nets have holes to let whales out, won't the fish get out too? Then what will my dad do to make money?

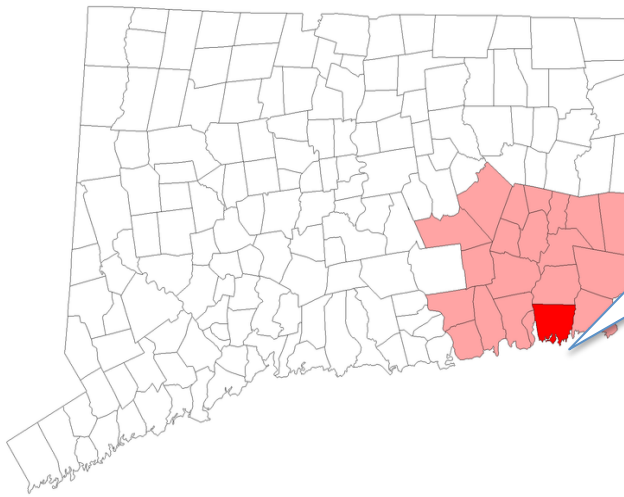


That one in the middle is my dad's fishing boat. He goes out to catch different types of fish!

We live right here. On the southeastern corner of Australia!



Hi! I'm Tim. I live in Groton, Connecticut, and I looove whales. I have whale posters, whale books, and know everything there is to know about whales. I haven't gotten to see one yet, but my mom says that maybe next year we can go on a whale watch! I also want to save the whales. I don't think humans should ever kill whales—either on purpose or by accident.



That's me! The dark spot!

This is my favorite poster!



And it has my favorite whale...the humpback!

Konchiwa! I'm Yuki, and I live near Tokyo, Japan. My mom works on a whaling ship. Some other countries and organizations don't like that we hunt whale, but we think it's important. It gives my mom work. They kill the whale and take some notes about it for research, and then sell the whale meat, which some people in my country think is delicious!



The meat in this picture is whale. It's being sold at a market in Tokyo.

Hallo! I'm Bard. I live in a small village in Norway. My family has a boat and hunts minke whales like he have done for generations. We sell the whales to local markets and keep some for ourselves. My family (and many members of the Norweigan government) think the minke whale population is stable enough to be hunted, if the hunting is limited. Also, there aren't a lot of jobs up here and many fear younger people will leave if there aren't any opportunities. My older brother lives five hours away, but I would like to stay here when I grow up. It's my home!

This is our village during the warm (and short!) summer.



Here! We live here!



Hola! My name is Anita, and I live in Puerto Vallarta, Mexico. My dad and my mom are naturalists who run a small whale watch company, and many tourists go on our boat during the winter when the whales are here. I get to go on a lot too! I love seeing the whales, and they're the most important part of my family's income. Without them, we wouldn't have a business. Some years we see more whales than others. That's because whales migrate, and, even if we don't hurt them when they're down here, we can't control what happens when they leave our warm waters.



Here's the whale watch boat. Pretty cool, right?

Lots of people come on vacation here, but, for my family, it's home!



Hi! My name is Ben. I'm an Inupiat Native American. I live in Barrow, Alaska, the most northern point in the whole United States! While I speak English and live in the US, my family and I also have our own special traditions and language from our ancestors. Among these is the whale hunt. Each year, our community hunts a few bowhead or gray whales. This serves a few purposes. One, it is an important event for our community that brings us together. Second, it is an important source of protein and vitamin D. There aren't that many options for local food this far north!



These are some members of my community and the bowhead whale they just caught.

All the way up here!





Image credits for differences of opinion:

All maps from Wikipedia

<http://www.duke.edu/web/oceans/melbourne.html>

<http://www.zazzle.com/save+the+whales+posters>

http://en.wikipedia.org/wiki/Whaling_in_Japan

http://no.wikipedia.org/wiki/Fil:Mosterhamn_-_utsikt_fra_Amfiet.jpg

<http://www.vallarta-adventures.com/tours/whale-watching>

<http://www.alaskachronicle.com/inupiaks-still-whaling-in-barrow-ak/>

Needing Whales

- This is Lesson 2 of 4 regarding perceptions of whales that explores indigenous whaling. It is meant to be used individually or as a part of a larger unit on different perceptions of whales.
- Below are 2 activities, one of which deals with a Wampanoag myth and logo and the other of which explains the different ways whales were and are used.
- The main goals of these lessons is to highlight that perceptions change when products are needed, that certain indigenous groups had and continue to have a complicated and intertwined relationship with whales.

Activity 1: Analyzing the Wampanoag Gay Head Seal

Intended Grades:

- 5th-6th

Anticipated Length:

- 40 minutes

Goals:

- Critically analyze an image.
- Discuss myths, their function, and their continued importance to identity.

Standards Addressed:

- 1.5 Demonstrating understanding of how to use content area literacy skills to enable students to construct meaning through reading, writing, listening, speaking, viewing and presenting.
- 4.3 Leading students to construct meaning through the use of active learning strategies such as purposeful discourse and/or inquiry-based learning.

Materials:

- Wampanoag Tribe of Gay Head logo (attached)
- Wampanoag explanation of Moshup (attached)
- Image of Aquinnah Cliffs (attached)

Suggested Method:

- Show logo and ask students what they see.
- Once that has been discussed, hand out or display textual explanation.
- Show image of cliffs mentioned.
- Discussion could go in many different ways.
 - How is the story represented in the logo?
 - What do you make of the size difference between Moshup and the whale? What about their positioning?
 - What do you think the message or theme to this story is?
 - What is this myth explaining?
 - Why would such an explanation be important?
 - How are the Wampanoag connected to a place? What do you think might be the importance of this connection?

Activity2: The Many Uses of Whales

Intended Grades:

- 4th-5th

Anticipated Length:

- 45 minutes

Goals:

- Illuminate different uses for whales.
- Demonstrate that indigenous whaling (and people) span history and locations.

Standards Addressed:

- 2.2 Promoting engagement in and shared responsibility for the learning process and providing opportunities for students to initiate their own questions and inquiries.
- 3.6 Integrating learning activities that make real-world, career or global connections, and promote interdisciplinary connections whenever possible.
- 4.4 Varying the student and teacher roles in ways that develop independence and interdependence with the gradual release of responsibility to students.

Materials:

- Attached Images

Suggested Method:

- Show the various pictures of indigenous whale products or spread them out throughout the classroom.
- For each picture ask each of the following questions:
 - What do you see?
 - What part of the whale is being used?
 - How is it being used?
 - How might this use fill a need that might not otherwise be filled?
- Or, use attached worksheet.
- After the students have answered all questions for all images, come back together for a discussion.
 - Go through the images. What did they see?
 - What differences did they notice between the images? What similarities? What do they make of these similarities and differences?
 - How might a society consider whales when they had so many practical applications that could not be found elsewhere?

Additional Resources:

“Aboriginal Subsistence Whaling.” IWC. <http://iwcoffice.org/aboriginal>

Contains extensive information about whale populations, species, and international regulations and those specifically governing native whalers.

Haig-Brown, Roderick. *The Whale*. Toronto: Harbour Publishing, 1962.

An award winning novel about a young boy in a pre-Columbian Northwest tribe.

MacFarlan, Allan A., "The First Blackfish." In *Whales: A Celebration*, Gatenby, ed.

This is a retelling of a Tlingit/Pacific Northwest creation myth about pilot whales.

Activity 1 Materials



ABOUT MOSHUP

Moshup is believed by our tribe to be responsible for the present shapes of Martha's Vineyard, the Elizabeth Islands, Noman's Land, and Nantucket. He is a benevolent being of gigantic frame and supernatural power. He was sometimes thought of as the devil by those who did not understand him. Moshup's favorite daily food was a broiled whale, which he usually ate whole at a meal. He also threw many whales on the coast for the supper of the Wampanoag.

In those olden times, whales came close to shore for they had not learned to fear pursuit. From near the entrance to his den on the Aquinnah Cliffs, Moshup would wade into the ocean, pick up a whale, fling it against the Cliffs to kill it, and then cook

it over the fire that burned continually. The blood from these whales stained the clay banks of the Cliffs dark red. The coals of the largest trees (which Moshup plucked up by the roots), the bones of the whales, shark's teeth, and petrified quahogs that are still found today in the Cliffs are the refuse from Moshup's table. The Aquinnah Cliffs are a sacred place to our tribe. They are imprinted with one hundred million years of history.

Our tribal logo shows Moshup, bigger than life, holding a whale while standing on top of the Cliffs near the entrance to his gigantic den.

"Moshup was the first schoolmaster. From his home on the Cliffs he taught the people respect.... He also taught us to be charitable - for when he had great stores of fish he gave of his abundance."

<http://www.wampanoagtribe.net/Pages/FV1-0001BC20/S0050BFCB-0050C286>



http://en.wikipedia.org/wiki/File:Gay_Head_cliffs_MV.JPG

Activity 2: The Many Uses of Whales Worksheet

Name: _____

	Image 1	Image 2	Image 3	Image 4
What do you see?				
What part of the whale is being used?				
How is it being used?				
Do you think this picture is from the past or present?				
Why?				
Notes				

Activity 2 Images

Image 1



http://en.wikipedia.org/wiki/File:Maktaa_2_2002-08-10.jpg

Image 2



<http://www.smithsonianmag.com/science-nature/Barrow-Alaska-Ground-Zero-for-Climate-Change.html#>

Image 3:



<http://www.museevirtuel-virtualmuseum.ca/edu/ViewLoitDa.do?method=preview&lang=EN&id=10133>

Image 4:



http://firstpeoplesofcanada.com/fp_groups/fp_inuit3.html

Image 1 Info:

- Photo from 2002
- Inuit women
- Eating Muktak (skin and blubber from either a bowhead whale, beluga whale, or narwhal)
- Few options in northern latitudes for food variety, good source of vitamin D
- Meal can be a community gathering and also is the product of a hunt that helps to keep traditions alive.

Image 2 Info:

- Taken in 2010
- All of the structures in the images are made from parts of the whale.
- The two flanking objects are kayaks, which would have been made from whalebone (and in some instances still are).
- There are few other local materials to use for construction.
- This photo is of a monument to lost sailors, showing a connection between the past and the present and the continued importance of whales.

Image 3 Info:

- Sketch of whalebone houses of Inuit in Canada.
- Like kayaks, there were few other materials to provide structure to constructions.
- Sketch and information is from the Canadian Heritage Information Network
-

Image 4 Info:

- Artifact from Canada
- Harpoon made from “ivory,” either whalebone or walrus tusk.
- Used to hunt, some cultures still have to use older techniques in order to continue to hunt, others do not.

Selling Whales

Rebecca Merten

Mystic Seaport Intern, Summer 2012

- This is Lesson 3 of 4 regarding perceptions of whales that explores nineteenth-century commercial whaling. It is meant to be used individually or as a part of a larger unit on different perceptions of whales.
- Below are 2 activities; the first demonstrates the pervasiveness of whale products, and the second is primary source activity regarding whale perceptions.
- The goal of these lessons is the highlight that whales were seen as commodities in the nineteenth century that produced many necessary goods.

Activity 1: Modern Product Match Up

Intended Grades:

- 3rd-5th

Anticipated Length:

- 1 hour

Goals:

- To illustrate that important and multi-faceted commercial uses of whales by Americans in the nineteenth century.
- To learn basic graphing skills.

Standards Addressed:

- 1.6 Demonstrating understanding of how to use content area numeracy and analytical skills to enable students to problem solve, interpret and use data and numerical representations.
- 3.6 Integrating learning activities that make real-world, career or global connections, and promote interdisciplinary connections whenever possible.
- 3.9 Including strategies for teaching and supporting content area literacy skills and, when appropriate, numeracy skills.
- 4.1 Using a variety of evidence-based strategies to enable students to apply and construct new learning.

Materials:

This activity could be done with images or actual items, which could be easily found around a house.

- Hairbrush
- Fish Net
- WD-40
- Umbrella
- Flashlight, light bulb
- Perfume
- Soap
- Hair clips

- Walking cane
- Board game

Suggested Method:

- Set up modern “artifacts” in a row in front of the room.
- Ask students if they can group these objects or figure out why they are in front of them.
- Begin a discussion by asking the students if they would ever use whale products or eat whales.
- Ask if they think they would have if they had lived in the past.
- Next explain that you are going to see how many of the students would have used whale products if they lived in the past.
- Have the students indicate which of the products you’ve arranged that they use or that they have in their house (or that they use daily or weekly) either through a show of hands or another voting method.
- Chart the results on the board.
- Then, have the children turn the chart into a bar graph. (For older students, this could become a lesson on percentages to complicate the simple bar graphs.)
- Finally explain how all of these products would have partly been made from whale in the past and how all of us would have used them.
- How does what we need influence how we think about something?
- For advertisements for corsets, umbrellas, and soap see:
http://americanhistory.si.edu/onthewater/exhibition/3_7.html
- For images of whale oil, cribbage board, and ambergris (used to make perfume) see:
<http://www.girlonawhaleship.org/jernapp/main/category.do?ID=12>
- ENRICHMENT LESSON: Ask students to research what other objects were made with whale in the past and have them bring in that object’s modern equivalent into class. This could be a family project that causes students and their families to research and look through the house together. Students could also research how the object is made today.

Activity 2: Snapshot in Time: Whale Journal

Intended Grades:

- 3rd-5th

Anticipated Length:

- 30 minutes

Goals:

- To use a primary document in order to illuminate past whale perceptions and compare to current ones.

Standards Addressed:

- 3.8 Designing strategic questions and opportunities that appropriately challenge students and actively engage them in exploring the content through strategies such as discourse and/or inquiry-based learning.

- 4.1 Using a variety of evidence-based strategies to enable students to apply and construct new learning.
- 4.3 Leading students to construct meaning through the use of active learning strategies such as purposeful discourse and/or inquiry-based learning.

Material:

- Attached journal

Suggested Method:

- Read passage on worksheet together as students may have a difficult time with the handwriting.
- Students complete the worksheet.
- Lead a discussion about how whales are characterized in the primary sources versus how they are characterized today.

Additional Resources

“Charles W. Morgan.” Mystic Seaport.

http://www.mysticseaport.org/index.cfm?fuseaction=home.viewPage&page_id=58CDBE74-65B8-D398-78B82F78C63BCD4A

Mystic Seaport has been continually adding more and more content surrounding the vessel and its reconstruction, including primary documents, such as logbooks and crew lists, and an enormous amount of information. Short videos are available and more are to be added. The Seaport also sells a “Charles W. Morgan Buzzcard” multimedia CD-ROM, with a variety of educational materials for personal and classroom use.

“Commercial Fishers: Whaling.” Smithsonian.

http://americanhistory.si.edu/onthewater/exhibition/3_7.html

Maintained by the Smithsonian National Museum of Natural History, this is by far the best website about 19th-century whaling available, including images of a vast range of relevant objects, tools, charts, scrimshaw, and images with excellent if brief explanations. Tells about African-American experience with whaling. Includes audio files of whalemens songs.

“Laura Jernegan: Girl on a Whaleship.” <http://www.girlonawhaleship.org>

Maintained by the Martha’s Vineyard Museum, this is a superb website for any age, including a readable, viewable manuscript of a six-year-old girl going on a whaleship, including general information about whales and whaling. Accompanies book *A Whaling Captain’s Daughter* (2000).

Understanding Whales

- This is Lesson 4 of 4 regarding perceptions of whales that explores mid-twentieth century views regarding whales. It is meant to be used individually or as a part of a larger unit on different perceptions of whales.
- 2 activities follow; one is an analysis of the trailer of Cousteau's first nature documentary trailer, and the other is the creation and analysis of a timeline that outlines the conservation movement, focusing on whales.
- The main goals of these lessons are to explore how perception can change with new scientific knowledge.

Activity 1: *The Silent World* Trailer

Intended grades:

- All, depending on tailoring of the discussion

Anticipated length:

- 15 minutes

Goals:

- To critically watch and assess a movie clip.
- To draw comparisons with the past and present.

Standards Addressed:

- 1.4 Using technological and digital resources to promote learning, collaboration with colleagues and communication within a learning community.
- 3.8 Designing strategic questions and opportunities that appropriately challenge students and actively engage them in exploring the content through strategies such as discourse and/or inquiry-based learning.
- 4.2 Using technological and digital resources strategically to promote learning.

Materials:

- *The Silent World* Trailer <http://www.youtube.com/watch?v=JWtWG0JyCXI>

Suggested Method:

- Have students watch the trailer and explain what it is (info I will put in Background Information section).
- Give them the following questions:
 - What do you see in the trailer?
 - What do you hear?
 - What is your overall impression of the trailer?
 - What do you think the title, *The Silent World*, means?
- Discuss these questions.
- Watch the trailer again, but, this time, ask students to pay attention to differences between the past and the present.
 - What differences do you see between then and now?

- Are there things that people are doing that we wouldn't do now? What are they?
- Watch the trailer one more time and ask students to imagine they're watching this movie in 1954.
 - Imagine that you've never seen any underwater footage before, and you don't know anything about the underwater world, how would that change your impression of the trailer?
 - What would you think?
 - How might a movie like this change your understanding of the ocean?

Activity 2: Whale Song Timeline

Intended grade:

- 5th, though could change based on amount of data points and depth of discussion.

Intended time:

- 45 minutes

Goals:

- Create and critically analyze a timeline.
- Learn about the birth of the conservation in the United States.
- To understand how authorship can cause a biased conclusion.

Standards Addressed:

- 1.6 Demonstrating understanding of how to use content area numeracy and analytical skills to enable students to problem solve, interpret and use data and numerical representations.
- 4.2 Using technological and digital resources strategically to promote learning.
- 4.3 Leading students to construct meaning through the use of active learning strategies such as purposeful discourse and/or inquiry-based learning.

Materials:

- "Whale Song" <http://www.youtube.com/watch?v=WabT1L-nN-E>
- Joan Collins, "Farewell to Tarwathie." <http://www.youtube.com/watch?v=qV29xK2xyZ4>

Suggested Method:

- Have students place the follow items in a timeline (either individually or as a class):
 - 1927: The last American whaling voyage embarks from New Bedford.
 - 1946: The International Whaling Commission is founded to monitor whale stocks (not necessarily to conserve them).
 - 1953: *The Silent World* premieres.
 - Late 1950s: First recordings of humpback whale songs by the Navy off the coast of Hawaii. Link is not to those specific recordings! <http://www.youtube.com/watch?v=WabT1L-nN-E>

- 1970: Judy Collin's *Whales and Nightingales*, "Farewell to Tarwathie." <http://www.youtube.com/watch?v=qV29xK2xyZ4>
 - 1971: First scientific description of humpback whale songs published.
 - 1973: Endangered Species Act.
- This timeline could be made quickly and simply, or more complexly, with students having to figure out a way to represent time and measure years through the timeline.
- Once the timeline is made, take a few minutes to discuss what all of the events were (using Youtube videos).
- *Make sure that you note that these events are in no way tell the whole story and that the passage of the Endangered Species Act does not indicate an end.*
- Then, have the students discuss these questions either as a class or in small groups.
 - What trends do you notice?
 - What do you make of the almost 20 year gap between the last American whaling voyage and the foundation of the IWC?
 - What different perceptions of whales exist within these events?
 - How do they change?
 - How do they differ from today?
 - Hopefully the discussion can go in many directions, depending on the students' interests.
- Come back together, discuss what the groups discussed and thought about the timeline.
- Then, discuss the limits of the timeline.
 - What is missing?
 - What other information would you like?
 - When choosing these events, what might be the bias of the creator? (For example, other countries never stopped whaling because they ate the meat. How does this omission change the timeline?)

Additional Activity: Echolocation Game

Intended Grades:

- 1st-5th

Intended Length:

- 10-40 minutes (depends on how long you would like to play)

Goals:

- Understand echolocation.
- Work cooperatively.

Standards Addressed:

- 1.3 Using developmentally appropriate verbal, non-verbal and technological communications.
- 4.1 Using a variety of evidence-based strategies to enable students to apply and construct new learning.

Materials:

- “Whale Song” <http://www.youtube.com/watch?v=WabT1L-nN-E>
- Blindfold
- Cones to block off the bounds of the game

Instructions:

- Explain whale echolocation (video is fairly thorough).
- The game is essentially Marco Polo.
- One student is blindfolded and is the whale.
- Half of the remaining students be fish and the other half obstacles.
- The obstacles cannot move. The fish can. Have the obstacles position themselves around the play area.
- The blindfolded whale will say “click” to which the fish must respond “glug” and the rocks “rock.”
- The call and response will continue until the whale tags one of the fish.
- Make sure to explain that this is a walking-only game.
- An alternative to this set up is to have one whale and one fish. The rest of the students form a circle that contains the fish and the whale. The game still functions the same—with the students forming the circle being obstacles responding “rock” to the whale’s clicks, but it is an easy way to keep the size of the game contained.
- Come back together after the game has been played and discuss what the children learned:
 - How did it feel to be blindfolded?
 - Where might this type of communication might be better suited?

Additional Resources:

Burnett, D. Graham. *The Sounding of the Whale: Science and Cetaceans in the Twentieth Century*. Chicago: University of Chicago Press, 2012.

A recent, definitive, scholarly tome that focuses on the history of science and whale research and policy. Widely considered the new comprehensive work on 20th-century whaling.

Esbensen, Barbara Juster. *Baby Whales Drink Milk*. Harper Collins, 1994.

A picture book that explains basic facts about whales, highlighting what makes them mammals.